Evento Bimodal
Virtual / Presencial

42° Congreso de Ergonomía, Higi...
Medicina y Seguridad Ocupacio...

Hotel Intercontinental Medellín - Colo...

2, 3 y 4 de noviembre de 2...

28 Semana de la Salud Ocupacional

Lo humano y lo técnico
en un mundo que se transforma

SUSTAINABILITY & CLIMATE CHANGE

Organiza:

CSOA
CORPORACIÓN DE SALUD

CSOA
CORPORACIÓN DE SALUD OCUPACIONAL Y AMBIENTAL

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Hello!

I AM JAINAM MEHTA

I am on a mission to make this world a better place to live.

mehtajainam in

What is Sustainability ?

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Sustainable development is an organizing principle for meeting human development goals while also sustaining the ability of natural systems to provide the natural resources and ecosystem services on which the economy and society depend.

ECONOMY

ENVIRONMENT

SOCIETY

Meeting the needs of the present without compromising the ability of future generations to meet their own needs.

As the concept of sustainable development developed, it has shifted its focus more towards the Economic development, Social development and Environmental protection for future generations.

Pillars of Sustainability development

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Environmental Sustainability

At the environmental level, sustainability prevents nature from being used as an inexhaustible source of resources and ensures its protection and rational use.

Social Sustainability

At the social level, sustainability can foster the development of people, communities and cultures to help achieve reasonable and fairly-distributed quality of life, healthcare and education across the globe

Economic Sustainability

Sustainability focuses on equal economic growth, that generates wealth for all, without harming the environment.

" The greatest threat to our planet is the belief that Someone else will Protect it "

Importance of SDG's

- The Sustainable Development Goals work towards a world of peace and prosperity, eradicating major issues such as poverty and hunger, all while protecting the planet. In the midst of the climate crisis, this has never been more important.

- Sustainable development practices help countries grow in ways that adapt to the challenges posed by climate change, which will in turn help to protect important natural resources for ours and future generations.

- By the year 2050, it is estimated that our global population will likely reach 9 billion people. The challenge of sustainable development is to move forward in such a way that every single one of these people will be able to enjoy a substantial quality of life without being detrimental to our natural resources.

In the 2030 Agenda for Sustainable Development, Member States express their commitment to protect the planet from degradation and take urgent action on climate change.
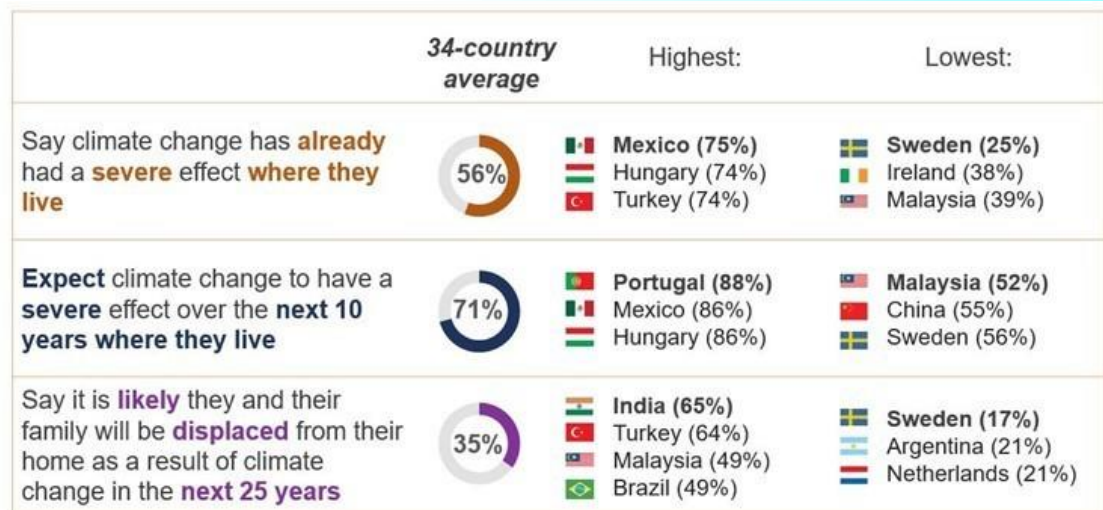
Climate
Change

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" *Sustainable Development & Climate Change are two sides of the same Coin* "

Climate Change Impact

- Climate change is expected to impact the availability of basic necessities of planet earth.

- The links between climate change and sustainable development are strong.

- Poor and developing countries, particularly least developed countries, will be among those most adversely affected and least able to cope with the anticipated shocks to their social, economic and natural systems.

	34-country average	Highest:	Lowest:
Say climate change has **already** had a **severe** effect **where they live**	56%	Mexico (75%) Hungary (74%) Turkey (74%)	Sweden (25%) Ireland (38%) Malaysia (39%)
Expect climate change to have a **severe** effect over the **next 10 years where they live**	71%	**Portugal (88%)** Mexico (86%) Hungary (86%)	**Malaysia (52%)** China (55%) Sweden (56%)
Say it is **likely** they and their family will be **displaced** from their home as a result of climate change in the **next 25 years**	35%	India (65%) Turkey (64%) Malaysia (49%) Brazil (49%)	Sweden (17%) Argentina (21%) Netherlands (21%)

Urban Climate Change Resilience

- Cities across the globe, particularly those with urban poor communities, face long-term challenges in ensuring the wellbeing of their inhabitants.

- Urban climate change resilience (UCCR) embraces climate change adaptation, mitigation actions, and disaster risk reduction while recognizing the complexity of rapidly growing urban areas and the uncertainty associated with climate change.

- There is no single action that will make a city resilient to climate change. Resilience is instead achieved through a number of actions, building upon each other over time

ACTIONS

Climate Mitigation	Climate Change Adaptation	Smart Cities

Importance of Smart Cities

- The proportion of the global population living in cities and towns is expected to rise from 54% to 75% by 2050.

- To mitigate the environmental impacts of this urban migration and fight climate change, the concepts of Smart Cities had become important.

- The purpose of the Smart Cities Mission is to drive economic growth and improve the quality of life of people by enabling local area development and harnessing technology, especially technology that leads to Smart, IoT enabled and Ai driven decision making for better future.
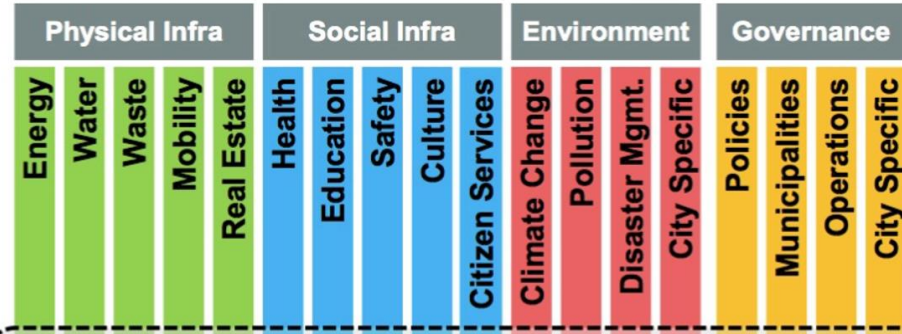
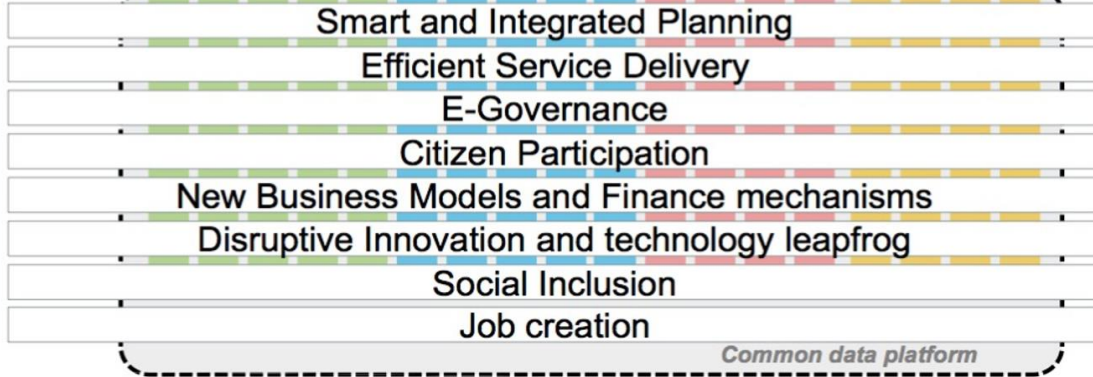| **Community at the core**	**More from Less**	**Coorporative & Competitive Federalism**	**Integration, Innovation, Sustainability**	**Technology as means, not the goal**
Communities at the core of planning and implementation	Ability to generate greater outcomes with the use of lesser resources	Cities selected through competion; flexibility to implement projects	Innovating methods; integrated and sustainable solutions	Careful selection of technology, relevant to the context of cities

Smart City Framework

Oizom Product Ecosystem

Smart City Solution

Target Parameters

Dust (PM$_{2.5}$ + PM$_{10}$)

Noise

Light, UV

Gases
(SOx, NOx, CO, O$_3$)

Wind, Rain,
Flood

Temperature,
Humidity, Pressure

Data Use-case

City Environment Monitoring

Industrial Impact on City

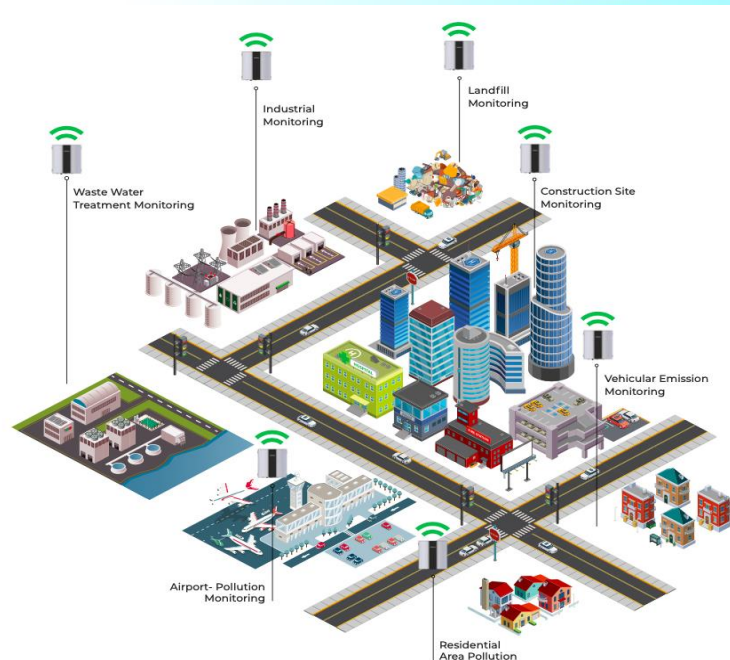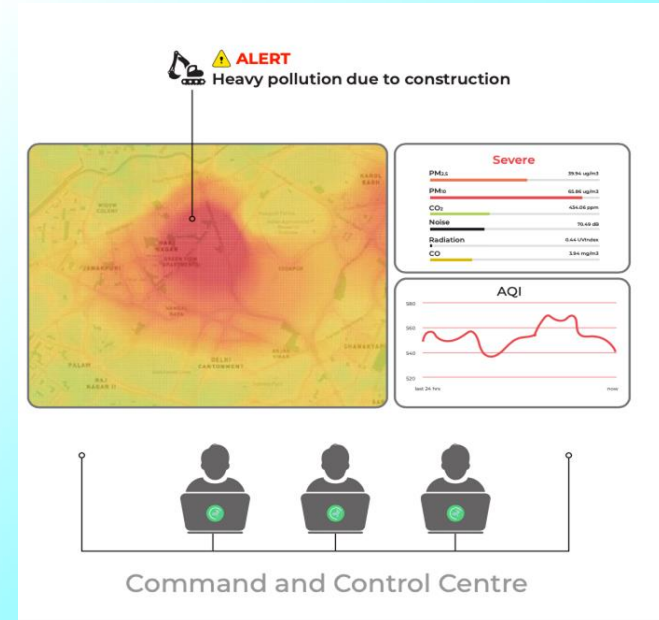Traffic Management

Sustainable Urbanization and Development

Citizen Healthcare

Industrial
Monitoring

Landfill
Monitoring

Waste Water
Treatment Monitoring

Construction Site
Monitoring

Vehicular Emission
Monitoring

Airport- Pollution
Monitoring

Residential
Area Pollution

Smart City Solution

- Oizom offers Polludrone™ - a 360-degree solution to measure concentrations of ambient pollutants in an urban environment like $PM_{2.5}$, PM_{10}, CO, NOx, SOx, & O_3.

- Polludrone™ monitors meteorological parameters like noise, temperature, humidity, ambient pressure, rainfall, and floods.

- It transmits real-time data through a wireless communication protocol to a cloud platform.

- The equipment is fully solar-powered with long battery back up.

- Its IP65 enclosure makes it robust for harsh ambient conditions.

- The data from Polludrone™ is accessible on the Oizom Terminal which visualizes and analyzes the data in the desired formats like reports, alerts, heatmaps, trend analysis etc.

Smart City Projects using our solution

25 Smart city Projects + 5 in Pipeline

Smart City Case Studies

Gandhinagar Smart City Project

Kakinada Smart City Project

Gandhinagar Municipal Corporation monitored the city's environmental health by installing Oizom Polludrone™. In addition to Air Quality, the Polludrone™ also monitored the rain levels to supplement the weather stations. The real-time data was shared to the mass audience through visual messaging displays for suggestive actions.

Kakinada Municipal Corporation partnered with Sterlite Tech to analyze their city's environment and create awareness among people. Oizom installed Polludrone™ to monitor real-time pollution data and environmental parameters. Through the solution, Kakinada authorities reduced the total environmental monitoring cost by 50%.

| Oct 2018 | 120 Km² | Polludrone | Integration to ICCC, Display APIs | Jul 2017 | 36 Km² | Polludrone | API Integration to ICCC |

Smart City Case Studies

Surat Smart City Project

Varanasi Smart City Project

Surat Municipal Corporation wanted to monitor the city's environmental condition as part of their smart city mission. With the help of Oizom Polludrone™, they were able to observe the city's environmental condition in real-time. The collected data was also showcased through web widgets on the city's official website.

Varanasi Municipal Corporation had to monitor the increasing pollution in the city mainly due to increased tourism and infrastructure developments. Oizom deployed its Polludrone™ in the city to analyze the pollution and meteorological parameters. The solution helped in devising a graded action plan to combat pollution.

Sep 2017   15 Km²   Polludrone   Integration to ICCC. Display APIs, Web Widget   Sep 2018   45 Km²   Polludrone   Integration to ICCC, Oizom Terminal

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"Sustainable development is the pathway to the future we want for all"